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ABSTRACT

Monitoring the Future is an ongoing research program which annually surveys high school seniors and also performs followup surveys of previous high school classes. This study used five different questionnaire forms to examine illicit and licit (alcohol and nicotine) drug use among U.S. college students and their age-peers not in college. The findings suggest little difference between young adults enrolled in college versus those who were not enrolled, in their annual prevalence of any illicit drug use, use of any illicit drug other than marijuana, or use of any illicit drug other than marijuana or stimulants. College students were also average for their age group in their annual prevalence rate for marijuana, although their rate of current daily marijuana use was half that of their age peers. Use of "crack" cocaine was distinctly lower among college students. College students rated slightly below noncollege-age peers in annual usage rates for lysergic acid diethylamide (LSD), opiates, barbiturates, tranquilizers and methaqualone. College students rated slightly higher annual prevalence of alcohol use, a higher monthly prevalence and a lower daily prevalence. Much lower smoking rates were observed in college students. The previous sex differences in college men's and women's smoking appeared to narrow, possibly due to random fluctuation. (BHK)

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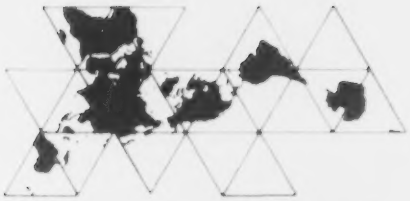

monitoring **the future**

occasional paper series

paper 25

DRUG USE AMONG AMERICAN COLLEGE STUDENTS AND THEIR NONCOLLEGE AGE PEERS

1988

Lloyd D. Johnston
Patrick M. O'Malley
Jerald G. Bachman

CG 023 324

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DRUG USE AMONG AMERICAN COLLEGE STUDENTS AND THEIR NONCOLLEGE AGE PEERS

1976-1987

Monitoring the Future Occasional Paper 25

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INTRODUCTION

This report presents the results of a special set of analyses performed on data collected by the Monitoring the Future project — analyses mutually developed by the project staff and representatives of the Department of Education. The focus is on drug use among American college students and their age-peers not in college.

The definition of *college student* used for this report is the same as that used in the annual monographs from the study (e.g., Johnston, O'Malley, and Bachman, 1988) — namely those follow-up respondents who are one to four years beyond high school and who indicate that they were registered in a two-year or four-year college as full-time students at the beginning of March in the year in question. Since the follow-ups are done on nationally representative samples of high school seniors in each class from 1976 onward, they yield very good samples of college students, except for the omission of those who are more than four years past high school — roughly 15% of all college students according to U.S. Census data.[1] Special analyses of the 1985 data, reported in Johnston et al. (1988), suggest that the inclusion of a six-year age band, for example, would shift the annual prevalence of all drugs except cocaine by no more than one- to two-tenths of a percent. Even cocaine use, which is the most strongly related to age, would shift by less than one percent.

The drugs to be discussed in this report include the two most important licitly used drugs — alcohol and nicotine — as well as the various types of illicit drug use. Discussion of the current levels of use for all college students, and for males and females, will be based on the 1987 survey data on all of the classes of illicit drugs. The discussion of other subgroup comparisons will be based on the 1986 and 1987 surveys, which were combined

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[1]U.S. Bureau of the Census. *Current population reports: Population characteristics, Series P 20, No. 400.* Washington, DC: U.S. Government Printing Office, 1982.

in order to increase the sample size available for analysis. Also, only a select set of illicit drug use measures will be used for these subgroup analyses. These specific measures are annual prevalence measures for marijuana, cocaine, any illicit drug,[2] and any illicit drug other than marijuana. Reducing the number of variables in this way will help to keep the review and discussion of subgroup difference to a more manageable scale.

RESEARCH DESIGN

Monitoring the Future is an ongoing research program at the University of Michigan's Institute for Social Research. Since its inception in 1975, it has received primary funding from the National Institute on Drug Abuse. The program is comprised of two series of annual nationwide surveys — one of a random sample of some 17,000 high school seniors located in about 135 high schools, and the other an annual mail follow-up survey of representative subsamples from all previously participating senior classes. The annual target follow-up samples amount to approximately 1,200 cases per graduating class. Roughly 85% of each class panel has been retained in the first year after high school — a figure which drops to approximately 70% by ten years after high school. To correct for the effects of this modest attrition on prevalence estimates for drug use, we reweight respondents so that their base year (senior year) prevalence on a number of drugs is equivalent to that observed among all seniors surveyed in senior year. We believe that this procedure corrects out much of the error in estimation which would be caused by attrition.

Five different questionnaire forms are used in this study. However, all of the variables to be discussed in this report are contained in all five forms (with the exception of questions on crack use, which are contained on only two forms).

Prevalence and trend estimates on seniors and follow-up respondents have been published annually in a series of monographs written by the present authors (e.g., Johnston, et al.,

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[2]In addition to marijuana, the use of "illicit drugs" includes any use of hallucinogens, cocaine, and heroin, as well as any use not under a doctor's order of other opiates, stimulants, sedatives or tranquilizers.

1988). The reader wishing more detail on the study's research design is referred to that series.

RESULTS

PREVALENCE OF DRUG USE IN 1987: COLLEGE STUDENTS VS. OTHERS[3]

Prevalence rates for college students and high school graduates who are their age peers are provided in Tables 1 to 5; and Figure 1 graphically displays these differences on a drug-by-drug basis. Having statistics for both groups makes it possible to see whether college students are above or below their age peers in terms of their usage rates. (The college-enrolled sample constitutes about 40% of the entire follow-up sample one to four years past high school.) Any difference between the two groups would likely be enlarged if data from the missing high school dropout segment were available. Therefore, any differences observed here are only an indication of the direction and relative size of differences between the college and the entire noncollege-enrolled populations, not an absolute estimate of them.

The findings can be summarized as follows:

- There is rather little difference between those enrolled in college versus high school graduates of the same age (i.e., one to four years past high school) not enrolled in college, in their annual prevalence of any illicit drug use (40% vs. 41%, respectively), use of any illicit drug other than marijuana (21% vs. 26%), or use of any illicit drug other than marijuana or stimulants (18% vs. 21%).

- As Table 2 illustrates, college students are also average for their age group in their annual prevalence rate for marijuana use (37% vs. 36% for noncollege). However, their rate of current daily marijuana use is only 2.3% versus 4.6% for their age peers. (A similar large difference in daily use was observable in high school between the college-bound and those not bound for college.)

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[3]A portion of this section will also be included in a forthcoming monograph in the annual series.

- Stimulants show the largest absolute difference in annual prevalence among the illicit drugs, 7.2% for college students versus 11.2% for those not in college. College students have close to the same rates as their age peers for cocaine use in general (13.7% annual prevalence vs. 15.4%). Annual use of "crack" cocaine, however, is distinctly lower among college students than among their noncollege-age peers, 2.0% vs. 4.4%, respectively.

- College students are slightly below their noncollege-age peers in annual usage rates for LSD (4.0% vs. 4.4%), opiates other than heroin (3.1% vs. 4.1%), barbiturates (1.2% vs. 3.1%), and tranquilizers (3.8% vs. 5.5%).

- Annual methaqualone use is very low in both groups, though lower among college students (0.8% vs. 1.4%). Although both groups give very low levels of self-reported heroin use, since 1981 annual prevalence has consistently been lower among the college-enrolled than among their age peers not in college.

- Regarding alcohol use, today's college students have slightly higher annual prevalence compared to their age peers (91% vs. 88%), a higher monthly prevalence (78% vs. 72%), and a slightly lower daily prevalence (6.0% vs. 6.6%). The most important difference, however, lies in the prevalence of occasions of heavy drinking (five or more drinks in a row in the past two weeks), which is 43% among college students, versus 36% among their age peers. Thus college students participate in more of what is probably heavy weekend drinking, even though they are a little less likely to drink on a daily basis.

- By far the largest difference between college students and others their age occurs for cigarette smoking. For example, their prevalence of daily smoking is only 14% vs. 30% for all high school graduates that age who are currently not in college. Smoking at the rate of half-a-pack a day stands at 8% vs. 24% for these two groups, respectively—a three-to-one ratio. The high school senior data show the college-bound to have much lower smoking rates in high school than the noncollege-bound: thus these substantial differences observed at college age actually preceded college attendance.

SEX DIFFERENCES IN PREVALENCE AMONG COLLEGE STUDENTS

Tabular data are provided for male and female college students separately in Tables 1 to 5.

- It may be seen that most of the sex differences among college students replicate those reported elsewhere (Johnston, et al., 1988) for all young adults one to ten years past high school, which in turn replicate sex

differences in high school for the most part. That means that mong college students, males have higher annual prevalence rates for most drugs, with the largest proportional differences for marijuana (41% vs. 34%), LSD (5.5% vs. 2.9%), cocaine (15.8% vs. 12.1%), opiates other than heroin (4.2% vs. 2.3%), and barbiturates (1.7% vs. 0.8%).

- There has been no consistent sex difference for tranquilizers over past years, nor for stimulants in recent years (the 1987 annual prevalence for both sexes is 7% for stimulant use).

- Males traditionally have had higher prevalence rates on methaqualone, but both sexes are now so close to zero that the absolute differences are negligible (0.9% vs. 0.8% for females).

- As is true for the entire young adult sample, substantial sex differences are to be found in daily marijuana use (3.1% for males vs. 1.7% for females), daily alcohol use (8.8% vs. 3.9%), and occasions of drinking five or more drinks in a row in the prior two weeks (54% vs. 35%).

- The one drug-using behavior which has shown a sex difference appreciably different from those observed in the sample of all young adults involves cigarette smoking. While the not-in-college segment of this age group has consistently shown little or no sex difference in smoking rates in recent years, among college students there has been a consistent and appreciable sex difference in smoking, with college women more likely to smoke. In 1987 the difference appeared to narrow — possibly due to random fluctuation caused by the limited sample sizes. (The increase in smoking among males was not statistically significant.) The male-female difference among those not in college enlarged some as noncollege females showed a decline (again, not statistically significant). As a result, in 1987 there is not such an appreciable difference in the sex ratios of the two groups; whether this is due to a fundamental shift in the relationship, or (more likely) to random sample fluctuation, remains to be seen.

OTHER SUBGROUP COMPARISONS

The remaining variables on which subgroup differences are examined are grouped under four general headings: characteristics of the larger environment in which the school is located, characteristics of the school, characteristics of the individual, and activities and accomplishments (grades) of the individual. Table 6 gives the data for each subgroup of college students on the various licit and illicit drug use measures mentioned earlier. It also contains for each subgroup the size of the sample upon which the statistics are based. The

reader is cautioned to take into account the limited sample sizes to be found in many subgroups in interpreting the reliability of subgroup differences observed. Table 7 gives the comparable data, where available, for the young adult subgroups who are one to four years beyond high school, but not in college. Figures 2 through 15 present graphically some of the more interesting subgroup differences among subgroups of college students.

Characteristics of the Larger Environment

Region of the Country. Table 6 shows that modest differences in use among college students are observed as a function of region, as is true among high school seniors. Overall illicit drug use tends to be highest in the Northeast and the West among college students and among their counterparts not in college. The differences are quite sizeable in the case of cocaine.

For the licit drugs, there are also modest regional variations. Cigarette smoking is lowest in the West, and next lowest in the South. (This difference is highly statistically significant in the young adult sample not in college, but is not significant in the college group, due in part to the much lower prevalence levels in the latter group. Note also that region was not ascertained before 1987, and therefore the number of cases is lower for this variable.) Alcohol use tends to be lower in the South and West than in the Northeast and North Central, although the overall regional differences in daily use rates are not statistically significant.

Urbanicity. Deviations from average usage levels of the illicit drugs appear to occur primarily at the more rural extremes on this dimension. College students residing in rural areas report lower than average use on all four illicit drug use measures. There is relatively little variability across the remaining levels of urbanicity, however. A similar finding exists for those not in college, although marijuana and cocaine use show up a little higher than average in the very large cities in this population.

The lower than average use in the rural areas does not result in an overall statistically significant difference in the college group, due in large part to the small number of cases (151) in the rural category. The differences are significant in the noncollege group.

For alcohol and cigarettes, the differences are quite modest.

School Characteristics

Two-year vs. Four-year Colleges. Only about one-fifth of the full-time college students are enrolled in two-year institutions. The students in two-year colleges do not show a very different pattern of illicit drug use than that observed among their counterparts in four-year schools. However, they do show a higher rate of cigarette smoking and a lower frequency of occasional heavy drinking.

Size of School. Respondents are asked to estimate the size of the student body at their institution, and there is obviously a wide variation in institutional size. While the measures of cocaine use and any illicits other than marijuana show up slightly higher in the largest institutions (i.e. those having more than 10,000 students), in general the differences are not great nor statistically significant. Marijuana use is slightly lower than average in the smallest institutions (i.e. those with less than 1,000 students); and the same holds true for occasional heavy drinking.

With cigarette smoking, the largest deviation from average again occurs in the smallest schools, but in this case they show the highest rate of use. (Note the small N, although the finding is significant.) Otherwise there is rather little difference in smoking rates as a function of school size.

Characteristics of the Individual

Years Past High School. Most students entering college do so immediately after high school, so the number of years past high school is probably not a bad approximation of freshman, sophomore, junior, and senior years. However, it is not exactly the same. The gradual falloff in numbers of cases between the first year and the fourth year past high school undoubtedly reflects the effects of college attrition. Of the overall follow-up

sample, about one-half of those one year past high school are college students, whereas by four years out only about one-third are.

Among college students there is little difference in overall illicit drug use and marijuana use, specifically, as a function of years past high school. Cocaine use does increase, however, as a function of years past high school, and (largely as a result) so does the index of use of any illicit drug other than marijuana. Quite similar findings are to be found among those not in college.

All three alcohol measures show some rise among college students between one year past high school and three years out. Those four years out are not any higher than those three years out, however. Among those not in college there is rather little systematic difference in the drinking statistics as a function of years past high school, except that the 30-day prevalence figure is lowest in the first year out.

Daily cigarette smoking — which we have documented elsewhere as showing primarily cohort effects (O'Malley, Bachman, and Johnston, 1988; Johnston, et al., 1988) — shows only modest differences as a function of years past high school in this historical period among college students, and practically no differences among those not in college.

Living Quarters. Four groupings are distinguished here: those living in fraternities or sororities (only 83 cases); those living in dormitories (960 cases); those living with parents (734 college students); and those living in other situations, most of which are apartments or rented rooms (636 college students). Those not in college fit only into the last two categories, of course. As we have reported elsewhere, living quarters are also confounded with marital status: most of those who are married are in the "other living quarters" category (Bachman, et al., 1984). Marriage has been shown to have important tempering effects on drug use and drinking, and those effects are reflected in these distinctions among living quarters. However, since very few of the college students are married (less than 3% in this sample), that is more of an issue in the not-in-college sample. It is also worth noting that self-selection plays an important choice in assignment to living quarters, all of

which means these data, like most of the others reported here, should be seen as descriptive of differences, and not necessarily indicative of causal relationships.

The data on illicit drug use suggest that those living in dormitories or with parents are using drugs quite a bit less than those living on their own off campus (the "other" group) or those living in fraternities or sororities. The same is true for alcohol consumption. (Because the sample size is so small for those living in fraternities or sororities, these data must be taken only as suggestive at this point.)

On the other hand, smoking is found to be lowest in fraternities and sororities and highest among those living with parents or off campus in the "other" settings.

Among those not in college, there is very little difference observed in drinking or illicit drug use between those living with parents and those in all "other" situations. Smoking is somewhat lower among those living with parents, however.

Field of Study. There are some sizeable differences in drug use related to the student's major field of study. These are perhaps seen most clearly in Figure 8 where the fields are arranged in rank order by marijuana use.[4] In general, those in the social sciences, humanities and art, and business and vocational/technical areas tend to have the highest rates of illicit drug use, as well as those who are undecided as to major. Among those groups with the lowest rates are students majoring in education, clerical, physical sciences, and engineering. A fairly similar ordering exists for the alcohol consumption measures, as well, except that those in engineering rank high on the measure of occasional heavy drinking (or "party drinking").

There is quite a wide range in the cigarette smoking rates among the disciplinary majors, with smoking being lowest among those in biology, engineering, and education and highest among those in the clerical, vocational/technical, humanities and the arts, and social science disciplines.

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[4]The reader is again cautioned to note the limited sample sizes.

Individual Activities and Academic Performance

Grades in High School. The college and noncollege groups distribute quite differently on the dimension of high school grades, as would be expected, with college students reporting higher grades in high school, on average. We have reported elsewhere (Bachman, Johnston, and O'Malley, 1981) that academic performance in the senior year of high school — which is what this measure represents — correlates negatively with substance use of all types, and particularly strongly for cigarette use. It thus comes as no surprise that similar results were obtained in these analyses in which college students are examined separately from those who are not in college. As shown by the data in Tables 6 and 7 (some of which are also displayed in Figure 9), most of the differentiation occurs at the upper end of the academic performance scale. Those college students with an academic average in high school senior year of A-minus or better are quite a bit less likely to use marijuana or cocaine in college than those who had a B-plus average, who in turn are somewhat less likely to use drugs than those with a B average. However, among college students there is little variation in illicit drug use as a function of high school grades below the B level. The same appears to be true for the measure of party drinking. (The daily use measure, however, shows a further increase in use below the B level.)

The noncollege population shows a similar phenomenon for illicit drug use overall--that is, an increase in use with descending grades, until a plateau is reached. It appears that the plateau may be reached one step lower on the grade scale, however, that is, at B-minus instead of B.

On the other hand, party drinking in this population appears to rise ordinally with descending grades across the entire grade scale. Cigarette smoking tends to rise ordinally and strongly with descending grades.

Grades in College. College students are asked to report their average grade in college over the past year. While we recognize that such a measure has a great deal of noise or error in it, due to wide variation in grading standards among institutions, it no doubt

contains some valid variance, as well. Thus, if a relationship is observed across all students, it is likely that the relationship would be heightened within any given institution.

The results on this admittedly imperfect measure show something of a step-function between an average grade of B and a B-minus. Those below this break point show a somewhat higher rate of illicit drug use than those above it. In addition, those with grades of A or A-minus show the lowest drug use of all. The same holds pretty well with regard to daily drinking and occasional binge (party) drinking, as well, except that there may be some fall-off in party drinking among those with the worst grades.

Cigarette smoking, on the other hand, shows a straightforward ordinal relationship with college grades — with smoking being highest among those doing the worst academically. (It may be worth noting, however, that even for this group the smoking rate is far lower than that found in the noncollege sample. It is also worth noting that smoking during the college years is more strongly linked to high school grades than to college grades.)

Employment Status. College students without jobs appear somewhat more likely to use marijuana than those with jobs (differences are not significant), but no more likely to use cocaine or "other illicit drugs than marijuana" taken as a class. They are significantly more likely to engage in party drinking. There appear to be no important differences between those with full-time jobs and those with part-time jobs.

Those who work are more likely to be smokers than those who do not. (The differences here do not reach statistical significance, though they may be quite real.)

Among those not in college two-thirds work full-time and working is more confounded with being female, married, and having children (among other things). There are few important differences among the three employment categories on any form of substance use

except alcohol — where 30-day and party drinking are both lowest among those without paid employment and highest among those with full-time jobs.

Evenings Out Per Week. Each respondent is asked to indicate on how many evenings per week he or she goes out for "fun and recreation." This has been found to be a very strong correlate of all forms of substance use among high school students, and the same pattern is clearly evident among both college students and their age-peers not in college. The relationships are ordinal and strong in virtually every case, including alcohol and cigarettes. It is worth noting that, although these relationships are quite strong in both groups, they are actually strongest among the college students. This may be due to the fact that going out frequently reflects a greater neglect of one's primary productive activity for college students, who have homework, than it does for those not in college.

REFERENCES

Bachman, J.G., Johnston, L.D., & O'Malley, P.M. (1981). Smoking, drinking, and drug use among American school students: Correlates and trends, 1975-1979. *American Journal of Public Health*, 71, 59-69.

Bachman, J.G., O'Malley, P.M., & Johnston, L.D. (1984). Drug use among young adults: The impacts of role status and social environments. *Journal of Personality and Social Psychology*, 47, 629-645.

Johnston, L.D., O'Malley, P.M., & Bachman, J.G. (1987). *National trends in drug use and related factors among American high school students and young adults, 1975-1986.* Washington, DC: National Institute on Drug Abuse.

Johnston, L.D., O'Malley, P.M., & Bachman, J.G. (1988). *Illicit drug use, smoking, and drinking by America's high school students, college students, and young adults, 1975-1987.* Washington, DC: National Institute on Drug Abuse.

O'Malley, P.M., Bachman, J.G. & Johnston, L.D. (1988). Period, age, and cohort effects on substance use among young Americans: A decade of change, 1976-86. *American Journal of Public Health*, 78, 1315-1321.

U.S. Bureau of the Census (1982). *Current population reports: Population characteristics, Series P-20, No. 400.* Washington, DC: U.S. Government Printing Office.

TABLE 1

Lifetime Prevalence[d] for Fourteen Types of Drugs: Full-Time College Students vs. Others

Among Respondents 1–4 Years Beyond High School in 1987

	Total		Males		Females	
	Full-Time College	Others	Full-Time College	Others	Full-Time College	Others
Marijuana	55.8	60.7	59.8	60.2	52.8	61.2
Inhalants[e]	13.2	13.5	15.7	16.3	11.4	11.1
LSD	8.0	11.8	9.9	14.7	6.6	9.4
Cocaine	20.6	24.4	23.6	26.4	18.4	22.6
"Crack"[a]	3.3	8.2	4.1	9.7	2.6	7.0
Heroin	0.6	1.2	0.6	1.7	0.5	0.8
Other opiates[b]	7.6	10.4	9.2	11.3	6.4	9.7
Stimulants, Adjusted[b,c]	19.8	29.1	18.0	28.4	21.2	29.6
Sedatives[b]	6.1	12.9	6.4	13.5	5.8	12.3
Barbiturates[b]	3.5	9.4	3.9	10.2	3.3	8.7
Methaqualone[b]	4.1	8.0	4.0	8.6	4.2	7.6
Tranquilizers[b]	8.7	13.8	9.0	13.0	8.5	14.5
Alcohol	94.1	93.4	95.6	93.3	93.1	93.5
Cigarettes	NA	NA	NA	NA	NA	NA
Approx. Wtd. N =	(1220)	(1660)	(520)	(760)	(700)	(900)

NOTE: NA indicates data not available.

[a]This drug was asked about in two of the five questionnaire forms. N is two-fifths of N indicated.

[b]Only drug use that was not under a doctor's orders is included here.

[c]Based on the data from the revised question, which attempts to exclude the inappropriate reporting of non-prescription stimulants.

[d]Data are uncorrected for cross-time inconsistencies in the answers.

[e]This drug was asked about in four of the five questionnaire forms. N is four-fifths of N indicated.

TABLE 2

Annual Prevalence for Fourteen Types of Drugs: Full-Time College Students vs. Others

Among Respondents 1–4 Years Beyond High School in 1987

	Total		Males		Females	
	Full-Time College	Others	Full-Time College	Others	Full-Time College	Others
Marijuana	37.0	36.1	41.2	38.1	33.8	34.5
Inhalants[d]	3.7	3.6	4.6	4.7	3.1	2.7
LSD	4.0	4.4	5.5	5.7	2.9	3.2
Cocaine	13.7	15.4	15.8	16.9	12.1	14.3
"Crack"[a]	2.0	4.4	2.8	4.3	1.4	4.6
Heroin	0.2	0.3	0.2	0.3	0.2	0.4
Other opiates[b]	3.1	4.1	4.2	4.4	2.3	3.8
Stimulants, Adjusted[b,c]	7.2	11.2	7.1	11.5	7.3	11.0
Sedatives[b]	1.7	3.6	2.2	3.9	1.3	3.4
Barbiturates[b]	1.2	3.1	1.7	3.3	0.8	3.0
Methaqualone[b]	0.8	1.4	0.9	2.0	0.8	0.9
Tranquilizers[b]	3.8	5.5	3.7	5.2	3.8	5.7
Alcohol	90.9	88.3	92.7	88.9	89.6	87.8
Cigarettes	NA	NA	NA	NA	NA	NA
Approx. Wtd. N =	(1220)	(1660)	(520)	(760)	(700)	(900)

NOTE: NA indicates data not available.

[a]This drug was asked about in two of the five questionnaire forms. N is two-fifths of N indicated.

[b]Only drug use that was not under a doctor's orders is included here.

[c]Based on the data from the revised question, which attempts to exclude the inappropriate reporting of non-prescription stimulants.

[d]This drug was asked about in four of the five questionnaire forms. N is four-fifths of N indicated.

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TABLE 3

Thirty-Day Prevalence for Fourteen Types of Drugs: Full-Time College Students vs. Others

Among Respondents 1–4 Years Beyond High School in 1987

	Total		Males		Females	
	Full-Time College	Others	Full-Time College	Others	Full-Time College	Others
Marijuana	20.3	21.4	23.4	24.8	18.0	18.6
Inhalants[d]	0.9	0.9	0.9	1.1	0.9	0.6
LSD	1.4	1.6	1.8	2.3	1.1	0.9
Cocaine	4.6	5.8	4.8	6.2	4.4	5.4
"Crack"[a]	0.4	1.9	0.8	1.1	0.1	2.4
Heroin	0.1	0.1	0.0	0.0	0.2	0.1
Other opiates[b]	0.8	1.0	1.0	1.1	0.7	1.0
Stimulants, Adjusted[b,c]	2.3	4.5	2.2	4.6	2.3	4.5
Sedatives[b]	0.6	1.2	0.7	1.5	0.5	0.9
Barbiturates[b]	0.5	1.0	0.7	1.2	0.3	0.8
Methaqualone[b]	0.2	0.4	0.1	0.5	0.2	0.2
Tranquilizers[b]	1.0	1.8	0.9	1.3	1.2	2.3
Alcohol	78.4	72.0	80.9	77.1	76.6	67.8
Cigarettes	24.0	36.0	22.1	34.4	25.4	37.3
Approx. Wtd. N =	(1220)	(1660)	(520)	(760)	(700)	(900)

NOTE: NA indicates data not available.

[a]This drug was asked about in two of the five questionnaire forms. N is two-fifths of N indicated.

[b]Only drug use that was not under a doctor's orders is included here.

[c]Based on the data from the revised question, which attempts to exclude the inappropriate reporting of non-prescription stimulants.

[d]This drug was asked about in four of the five questionnaire forms. N is four-fifths of N indicated.

TABLE 4

Daily Prevalence for Marijuana, Cocaine, Stimulants, Alcohol, and Cigarettes: Full-Time College Students vs. Others

Among Respondents 1–4 Years Beyond High School in 1987

	Total		Males		Females	
	Full-Time College	Others	Full-Time College	Others	Full-Time College	Others
Marijuana	2.3	4.6	3.1	7.4	1.7	2.3
Cocaine	0.1	0.2	0.1	0.2	0.0	0.1
Stimulants, Adjusted[a,b]	0.1	0.4	0.1	0.4	0.0	0.4
Alcohol						
Daily	6.0	6.6	8.8	9.3	3.9	4.4
5+ drinks in a row in past 2 weeks	42.8	36.2	53.5	47.3	34.7	27.0
Cigarettes						
Daily (any)	13.9	29.6	12.8	28.7	14.7	30.3
Half-pack or more per day	8.2	23.7	8.1	23.9	8.3	23.5
Approx. Wtd. N =	(1220)	(1660)	(520)	(760)	(700)	(900)

NOTE: The illicit drugs not listed here showed a daily prevalence of less than 0.05% in all groups.

[a]Based on the data from the revised question, which attempts to exclude the inappropriate reporting of non-prescription stimulants.

[b]Only drug use that was not under a doctor's orders is included here.

TABLE 5

Annual and Thirty-Day Prevalence of an Illicit Drug Use Index: Full-Time College Students vs. Others

Among Respondents 1–4 Years Beyond High School in 1987

	Total		Males		Females	
	Full-Time College	Others	Full-Time College	Others	Full-Time College	Others
	Percent reporting use in last twelve months					
Any illicit drug	40.1	41.1	43.3	41.8	37.7	40.6
Any illicit drug other than marijuana	21.3	25.7	23.5	26.4	19.6	25.2
Any illicit drug other than marijuana or stimulants	18.3	21.2	20.8	22.3	16.4	20.3
	Percent reporting use in last thirty days					
Any illicit drug	22.4	24.3	24.0	26.6	21.1	22.5
Any illicit drug other than marijuana	8.8	12.0	9.0	12.3	8.5	11.7
Any illicit drug other than marijuana or stimulants	7.1	9.2	7.4	9.7	6.8	8.8
Approx. Wtd. N =	(1220)	(1660)	(520)	(760)	(700)	(900)

TABLE 6

Prevalence of Drug Use among College Students 1-4 Years Past High School
Surveyed in 1986 and 1987

	Approx. Wtd. N	Any Illicit Use, Annual	Any Illicit Use Other than Marijuana, Annual	Marijuana, Annual	Cocaine, Annual	Alcohol: 30 Day	Alcohol: Daily	Alcohol: 5+ Drinks in Last 2 Weeks	Cigarettes, Daily
CHARACTERISTICS OF THE LARGER ENVIRONMENT									
Region[a]									
Northeast	269	48.0	26.2	44.9	19.7	83.5	6.3	44.4	16.4
North Central	364	37.1	17.8	34.2	9.9	83.2	6.9	47.7	14.7
South	359	36.6	18.1	32.9	9.7	74.5	4.8	38.9	13.8
West	206	40.2	25.3	37.1	17.5	71.0	5.5	37.7	9.1
		*	**	**	***	***		*	
Urbanicity									
Country	151	34.3	19.7	30.0	10.9	76.8	3.2	34.8	17.9
Town	799	43.3	21.5	40.2	14.5	80.2	5.3	46.4	12.7
Medium city	665	41.5	22.8	37.8	15.4	80.4	6.4	45.2	12.2
Large city	474	45.3	27.0	40.2	16.8	78.8	3.9	42.5	15.1
Very large city	300	41.3	22.7	39.1	16.6	74.4	4.9	39.6	11.0
								*	
SCHOOL CHARACTERISTICS									
Type of College									
2 year	448	39.6	23.5	36.5	15.0	73.4	5.2	35.6	18.2
4 year	1965	43.2	23.1	39.4	15.4	80.4	5.3	45.8	12.2
						***		***	***
School Size									
Less than 1,000	185	36.6	20.7	31.5	12.2	74.4	6.7	35.2	23.4
1,000-2,999	427	39.2	21.8	36.2	13.6	78.1	4.3	42.6	12.7
3,000-9,999	689	42.8	22.2	38.9	13.7	79.0	4.2	45.4	14.7
10,000-19,999	543	45.9	24.1	43.4	17.1	80.9	6.1	47.3	11.4
20,000 or more	538	43.2	25.2	38.7	17.8	79.9	6.6	43.8	10.6
				*				*	***

[a] Region was not ascertained in 1986, this applies to 1987 only.

Level of significance of between group differences based on chi square statistic: * = .05, ** = .01, *** = .001

TABLE 6 (continued)

Prevalence of Drug Use among College Students 1-4 Years Past High School Surveyed in 1986 and 1987

INDIVIDUAL CHARACTERISTICS	Approx. Wtd. N	Any Illicit Use, Annual	Any Illicit Use Other than Marijuana, Annual	Marijuana, Annual	Cocaine, Annual	Alcohol			Cigarettes, Daily
						30 Day	Daily	5+ Drinks in Last 2 Weeks	
Years Past High School									
1 year	726	40.9	19.8	37.7	12.3	74.6	3.9	37.6	14.4
2 years	662	42.7	23.4	39.3	14.6	78.1	4.7	44.0	11.6
3 years	565	44.3	26.3	40.1	17.9	82.7	7.3	49.4	12.7
4 years	461	42.8	24.2	38.7	18.1	83.6	5.9	46.8	14.9
			*		**	***	*	***	
Living Quarters									
Fraternity/sorority	83	48.5	30.6	44.6	22.6	89.7	16.6	74.3	8.7
Dormitory	960	42.0	20.0	39.0	12.3	79.0	3.9	43.9	10.9
Parents	734	36.1	21.5	31.8	13.8	73.3	4.1	33.2	14.8
Other	636	50.0	28.7	46.1	20.9	84.5	7.4	52.3	15.9
		***	***	***	***	***	***	***	**
Field of Study									
Clerical	41	26.9	13.9	23.5	4.1	66.4	0.0	24.8	25.2
Vocational-technical	74	45.5	29.9	39.5	21.7	80.0	8.0	46.9	17.7
Biology	165	40.3	22.2	38.1	11.9	73.0	2.5	36.6	6.5
Business	615	45.6	25.8	41.5	17.4	82.9	6.2	49.6	13.8
Education	197	35.6	12.8	31.9	5.9	70.8	4.5	39.7	10.8
Engineering	235	34.2	17.0	30.1	9.3	80.9	3.9	49.2	7.1
Humanities/art	187	46.4	26.9	45.5	20.0	81.1	5.4	43.7	18.6
Physical sciences	133	36.1	14.4	34.2	11.5	77.5	4.7	41.6	10.8
Social sciences	232	50.3	30.7	46.1	18.9	85.8	8.1	47.1	16.7
Other academic	288	37.6	21.5	33.4	17.1	74.4	4.7	35.4	14.6
Don't know	188	52.1	27.9	48.3	18.9	78.5	5.9	43.2	14.5
		***	***	***	***	***		***	***

Level of significance of between group differences based on chi-square statistic: * = .05, ** = .01, *** = .001.

TABLE 6 (continued)

Prevalence of Drug Use among College Students 1–4 Years Past High School Surveyed in 1986 and 1987

INDIVIDUAL ACTIVITIES AND GRADES	Approx. Wtd. N	Any Illicit Use, Annual	Any Illicit Use Other than Marijuana, Annual	Marijuana, Annual	Cocaine, Annual	Alcohol			Cigarettes Daily
						30 Day	Daily	5+ Drinks in Last 2 Weeks	
Grades in High School									
A, A-	829	32.7	18.3	30.0	11.0	74.6	2.9	37.4	7.6
B+	529	43.8	21.1	40.2	11.2	81.3	5.4	45.3	12.9
B	478	49.7	27.7	45.9	19.7	81.7	6.5	48.5	16.6
B-	269	51.4	28.4	45.2	19.1	81.3	6.5	46.5	18.8
C+	181	47.9	25.9	43.0	16.4	81.3	9.0	48.3	16.7
C and less	101	45.6	30.0	43.5	21.9	83.0	8.4	49.8	24.6
		***	***	***	***	**	***	***	***
Grades in College									
A, A-	411	34.9	19.8	32.0	12.2	73.9	3.2	37.4	10.7
B+	405	38.1	20.2	35.6	13.5	77.4	4.6	40.9	11.3
B	518	41.9	21.4	37.9	13.9	80.6	4.6	44.2	12.5
B-	397	47.0	29.0	42.5	20.0	78.9	6.3	48.9	13.7
C+	361	47.7	25.8	43.8	17.8	84.6	6.9	50.0	15.6
C and less	296	47.6	23.9	42.8	15.7	80.8	7.2	44.5	17.6
		***	**	***	*	**		***	
Employment Status									
Full-time job(s)	262	39.4	24.9	34.5	16.1	80.7	6.9	41.2	17.2
Part-time job	1045	41.5	22.7	37.8	14.4	78.3	4.5	40.3	13.5
Other	970	44.8	23.3	41.2	16.0	80.2	5.9	48.3	11.7
								***	
Number of Evenings Out per Week									
Less than 1	172	17.0	6.1	14.6	2.4	54.7	1.2	14.9	8.5
1	357	29.1	14.4	24.7	8.1	68.6	1.6	23.8	8.5
2	758	38.2	18.8	34.5	11.7	80.2	2.6	41.3	11.3
3	728	51.5	28.9	47.6	19.0	84.5	6.9	54.2	15.5
4 5	313	55.5	33.5	54.2	26.3	88.1	11.4	61.5	18.2
6 7	67	69.7	49.1	61.6	38.7	82.2	20.5	59.9	26.2
		***	***	***	***	***	***	***	***

Level of significance of between group differences based on chi square statistic: * = .05, ** = .01, *** = .001

TABLE 7

Prevalence of Drug Use among Respondents 1-4 Years Past High School Who Were Not College Students

Surveyed in 1986 and 1987

CHARACTERISTICS OF THE LARGER ENVIRONMENT	Approx. Wtd. N	Any Illicit Use, Annual	Any Illicit Use Other than Marijuana, Annual	Marijuana, Annual	Cocaine, Annual	Alcohol: 30 Day	Alcohol: Daily	Alcohol: 5+ Drinks in Last 2 Weeks	Cigarettes, Daily
Region[a]									
Northeast	325	44.6	29.0	39.7	21.2	74.6	8.5	37.1	34.6
North Central	439	44.2	25.1	39.1	12.1	77.8	6.3	41.3	35.8
South	546	35.5	20.6	31.9	11.6	65.5	6.4	31.5	26.8
West	295	46.8	34.3	39.5	22.5	72.7	5.7	35.5	20.9
		***	***	*	***	***		*	***
Urbanicity									
Country	533	32.8	18.8	28.1	9.2	67.5	6.0	34.2	29.4
Town	1069	43.2	27.7	37.4	16.9	72.6	6.6	38.4	31.4
Medium city	759	43.4	27.2	38.6	18.9	71.5	6.7	35.9	29.2
Large city	586	45.3	29.8	40.4	20.4	74.3	7.2	37.9	29.2
Very large city	321	47.0	30.7	43.6	22.0	73.6	7.2	40.7	30.2
		***	***	***	***				
SCHOOL CHARACTERISTICS									
Type of College									
2 year					Not Relevant				
4 year									
School Size									
Less than 1,000									
1,000-2,999									
3,000-9,999					Not Relevant				
10,000-19,999									
20,000 or more									

[a] Region was not ascertained in 1986, this applies to 1987 only.

Level of significance of between group differences based on chi square statistic: * = .05, ** = .01, *** = .001

TABLE 7 (continued)

Prevalence of Drug Use among Respondents 1–4 Years Past High School Who Were Not College Students

Surveyed in 1986 and 1987

INDIVIDUAL CHARACTERISTICS	Approx. Wtd. N	Any Illicit Use, Annual	Any Illicit Use Other than Marijuana, Annual	Marijuana, Annual	Cocaine, Annual	Alcohol: 30 Day	Alcohol: Daily	Alcohol: 5+ Drinks in Last 2 Weeks	Cigarettes, Daily
Years Past High School									
1 year	742	39.5	23.1	36.3	14.1	66.4	7.1	38.0	29.5
2 years	833	41.2	26.9	36.8	17.4	72.9	6.2	37.9	30.5
3 years	843	44.7	27.9	38.6	17.4	73.0	6.1	35.8	29.8
4 years	904	43.9	29.1	37.3	19.4	74.4	7.0	37.3	31.0
			*		*	***			
Living Quarters									
Fraternity/sorority									
Dormitory									
Parents	1714	41.7	26.7	36.5	17.8	72.2	6.1	38.1	28.3
Other	1511	42.6	26.7	37.5	16.3	70.9	6.8	35.2	33.2
									**
Field of Study									
Clerical									
Vocational-technical									
Biology									
Business									
Education									
Engineering					Not Relevant				
Humanities/art									
Physical sciences									
Social sciences									
Other academic									
Don't know									

Level of significance of between-group differences based on chi square statistic: * = .05, ** = .01, *** = .001

TABLE 7 (continued)

Prevalence of Drug Use among Respondents 1-4 Years Past High School Who Were Not College Students

Surveyed in 1986 and 1987

INDIVIDUAL ACTIVITIES AND GRADES	Approx. Wtd. N	Any Illicit Use, Annual	Any Illicit Use Other than Marijuana, Annual	Marijuana, Annual	Cocaine, Annual	Alcohol: 30 Day	Alcohol: Daily	Alcohol: 5+ Drinks in Last 2 Weeks	Cigarettes, Daily
Grades in High School									
A, A-	392	29.4	16.9	25.6	9.4	65.4	6.1	26.4	17.5
B+	472	39.2	26.2	33.8	15.1	66.4	2.9	31.3	22.1
B	695	38.8	25.2	33.9	15.6	71.5	7.0	36.2	29.9
B-	547	47.5	31.4	41.1	19.8	74.5	7.3	39.5	31.0
C+	520	46.7	27.8	41.8	18.7	74.8	6.8	41.0	35.4
C and less	594	48.8	31.1	42.8	21.7	76.3	8.8	45.5	38.6
		***	***	***	***	***	**	***	***
Grades in College									
A, A-									
B+									
B				Not Relevant					
B-									
C+									
C and less									
Employment Status									
Full-time job(s)	2163	42.6	27.3	37.5	17.6	75.3	6.9	39.5	30.5
Part-time job	508	41.9	26.0	37.0	16.7	70.6	6.2	35.7	27.2
Other	525	42.5	26.6	37.8	16.4	61.5	6.9	31.6	31.5
						***		***	
Number of Evenings Out per Week									
Less than 1	376	31.1	17.1	24.7	7.6	50.4	2.5	14.2	27.9
1	619	34.0	19.5	29.0	11.7	63.5	1.4	23.4	24.1
2	915	39.8	25.0	35.5	15.2	72.4	4.5	35.3	27.1
3	750	46.8	30.5	41.8	20.7	79.6	7.7	46.5	30.3
4 5	464	55.3	37.9	49.4	27.5	85.7	14.0	56.4	37.4
6 7	167	56.4	38.7	51.8	25.3	79.3	21.2	57.7	51.6
		***	***	***	***	***	***	***	***

Level of significance of between group differences based on chi square statistic: * = .05, ** = .01, *** = .001.

FIGURE 1

Prevalence and Recency of Use
Full-Time College Students vs. Others

Among Respondents 1-4 Years Beyond High School in 1987

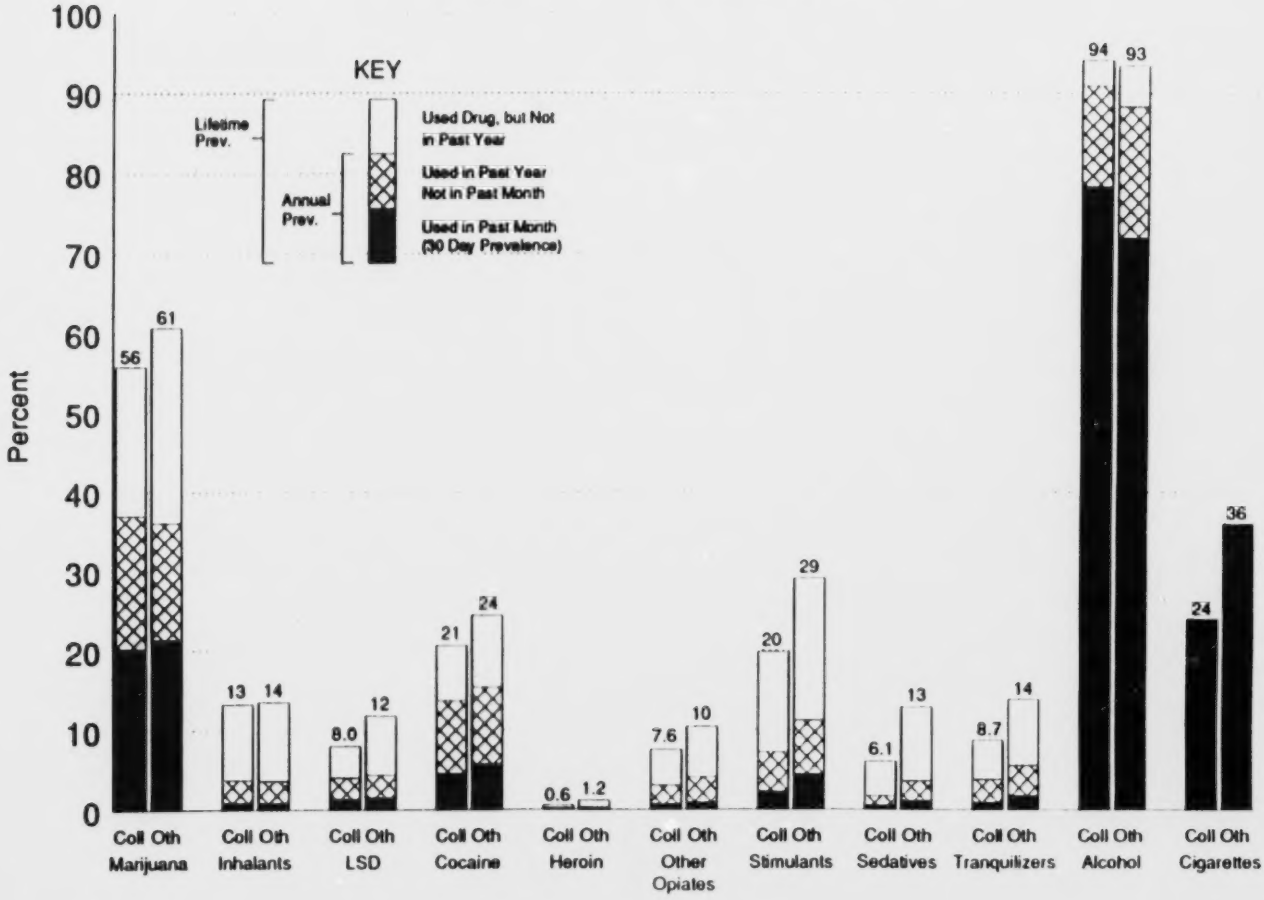


FIGURE 2

Drug Use by College Students in 1987

by Region of the Country

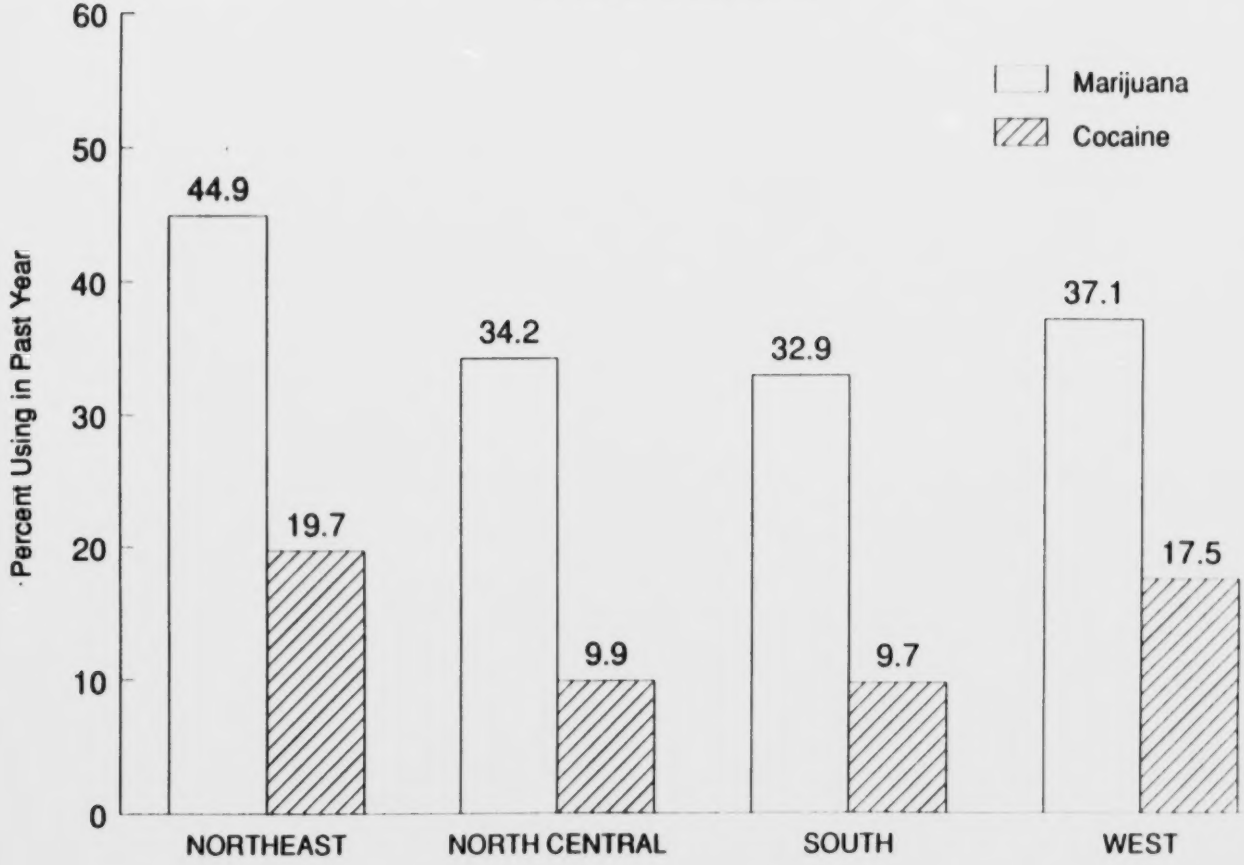


FIGURE 3

Drug Use by College Students in 1986 and 1987

by Urbanicity

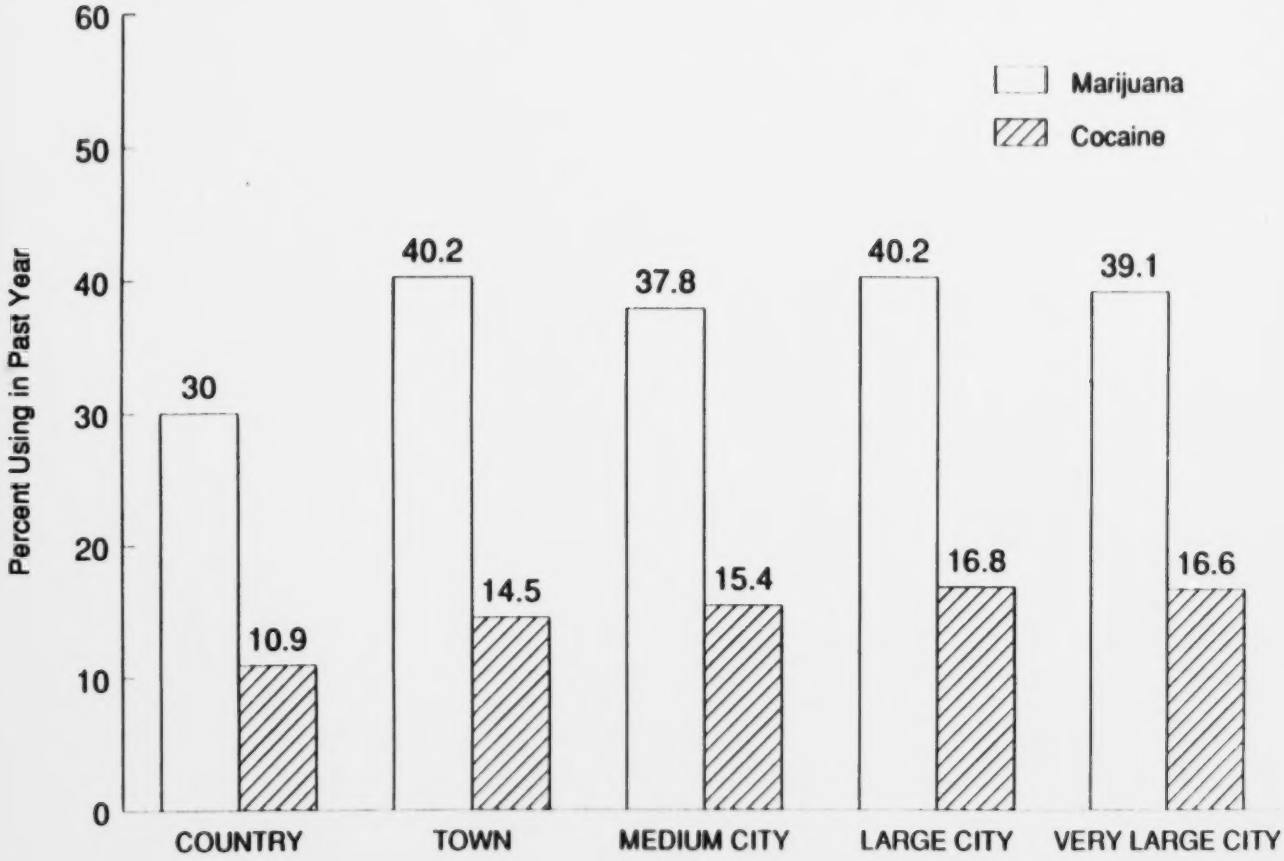


FIGURE 4

Drug Use by College Students in 1986 and 1987

by Type of College

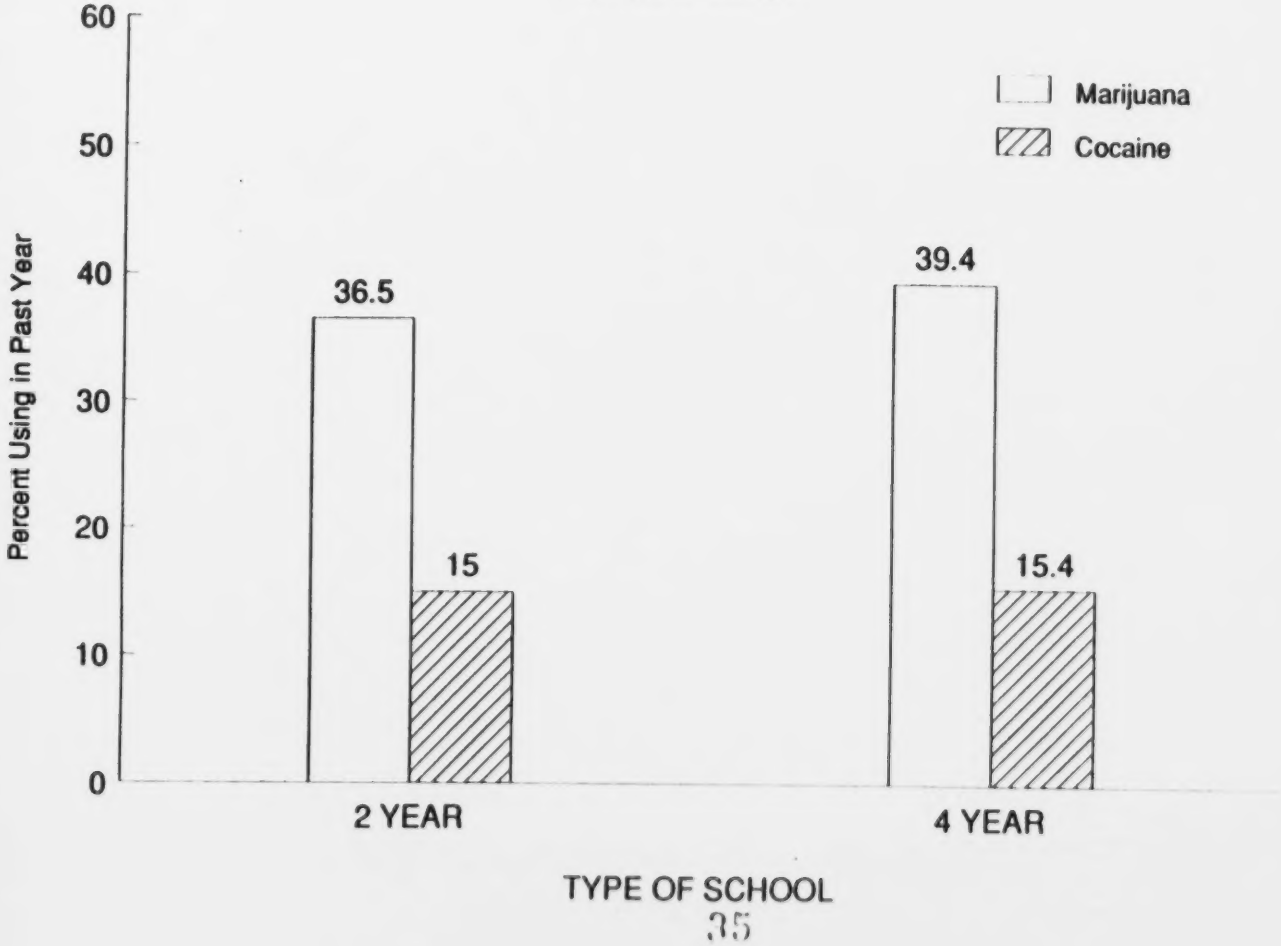


FIGURE 5

Drug Use by College Students in 1986 and 1987

by School Size

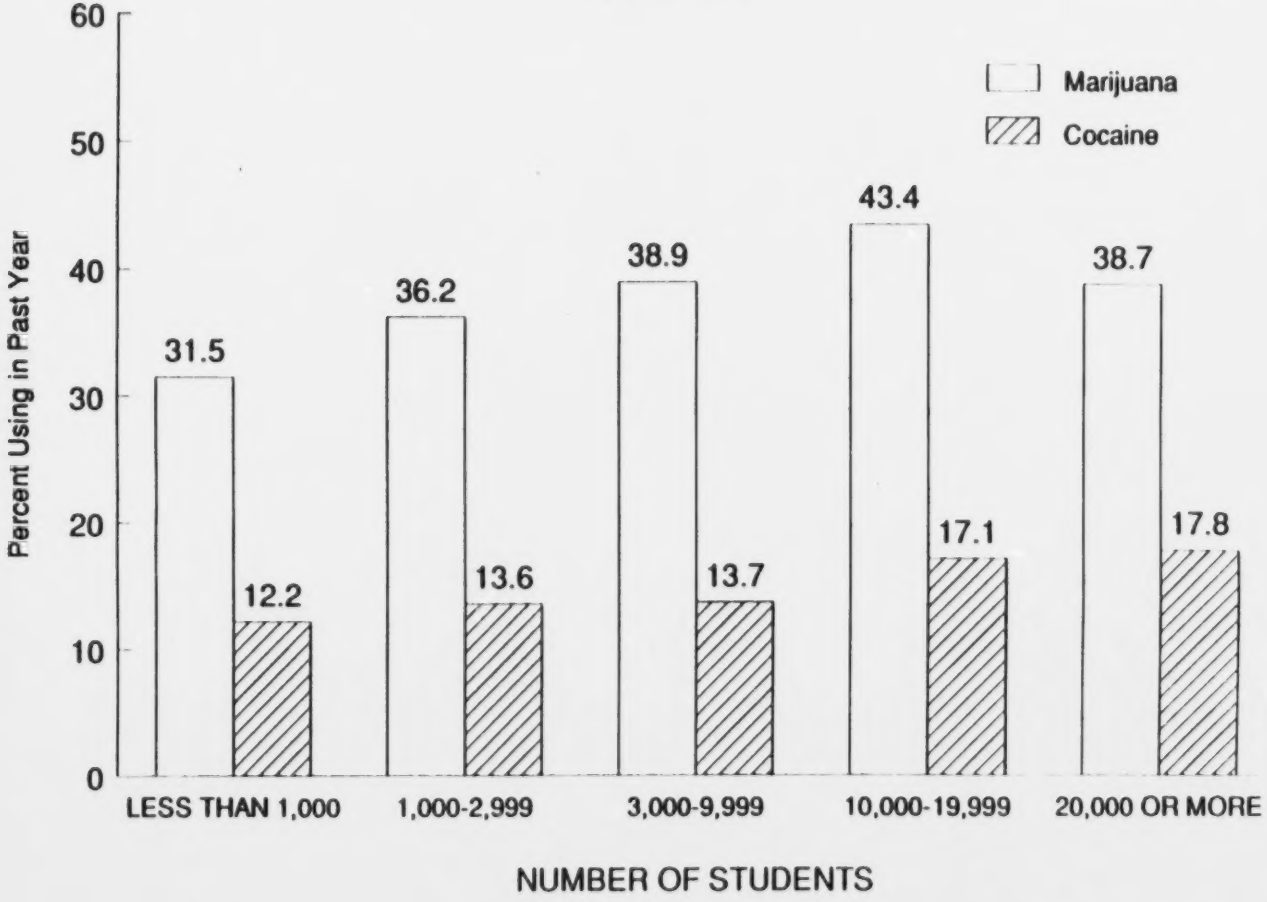


FIGURE 6

Drug Use by College Students in 1986 and 1987

by Years Past High School

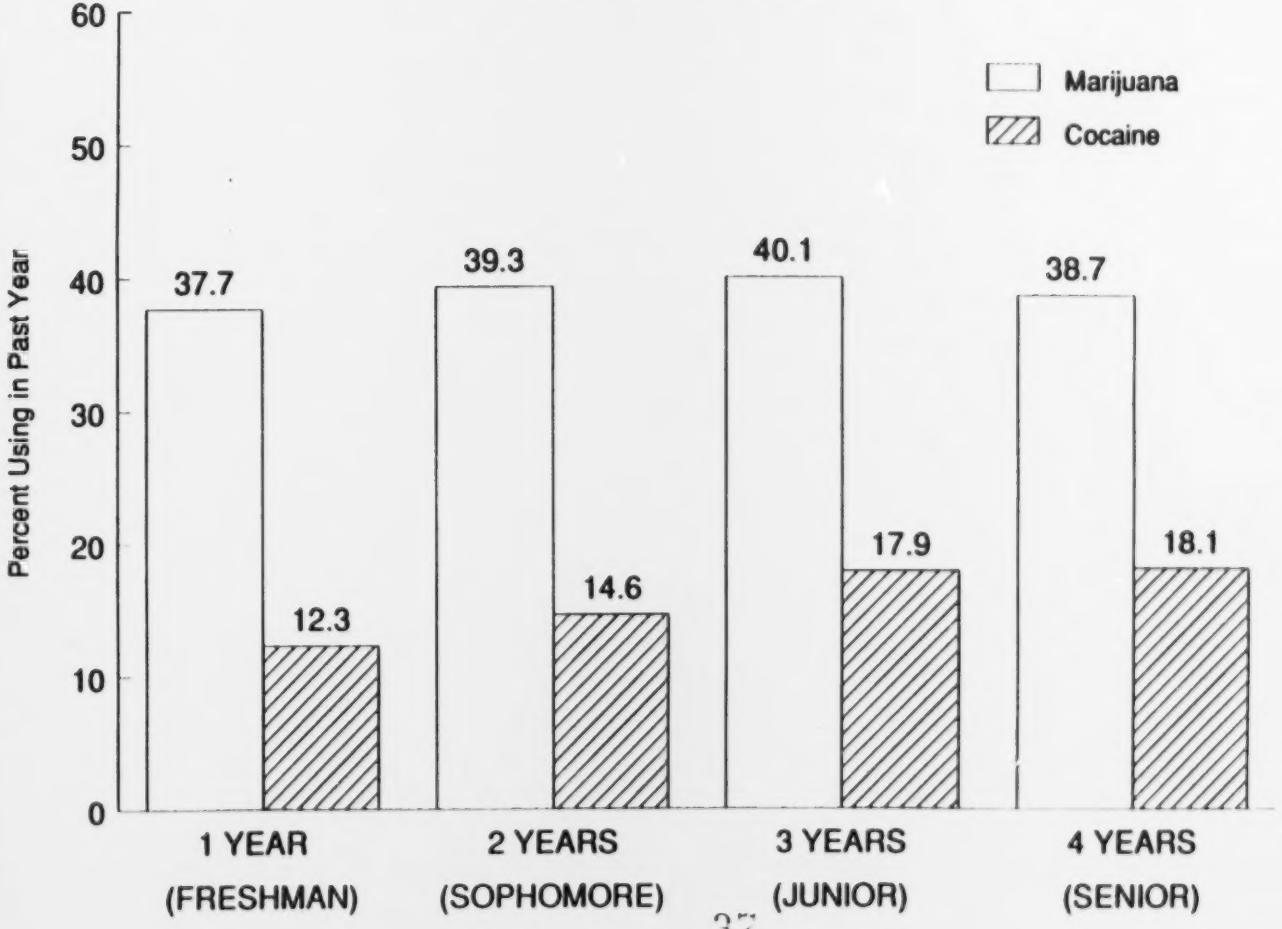


FIGURE 7

Drug Use by College Students in 1986 and 1987

by Living Quarters

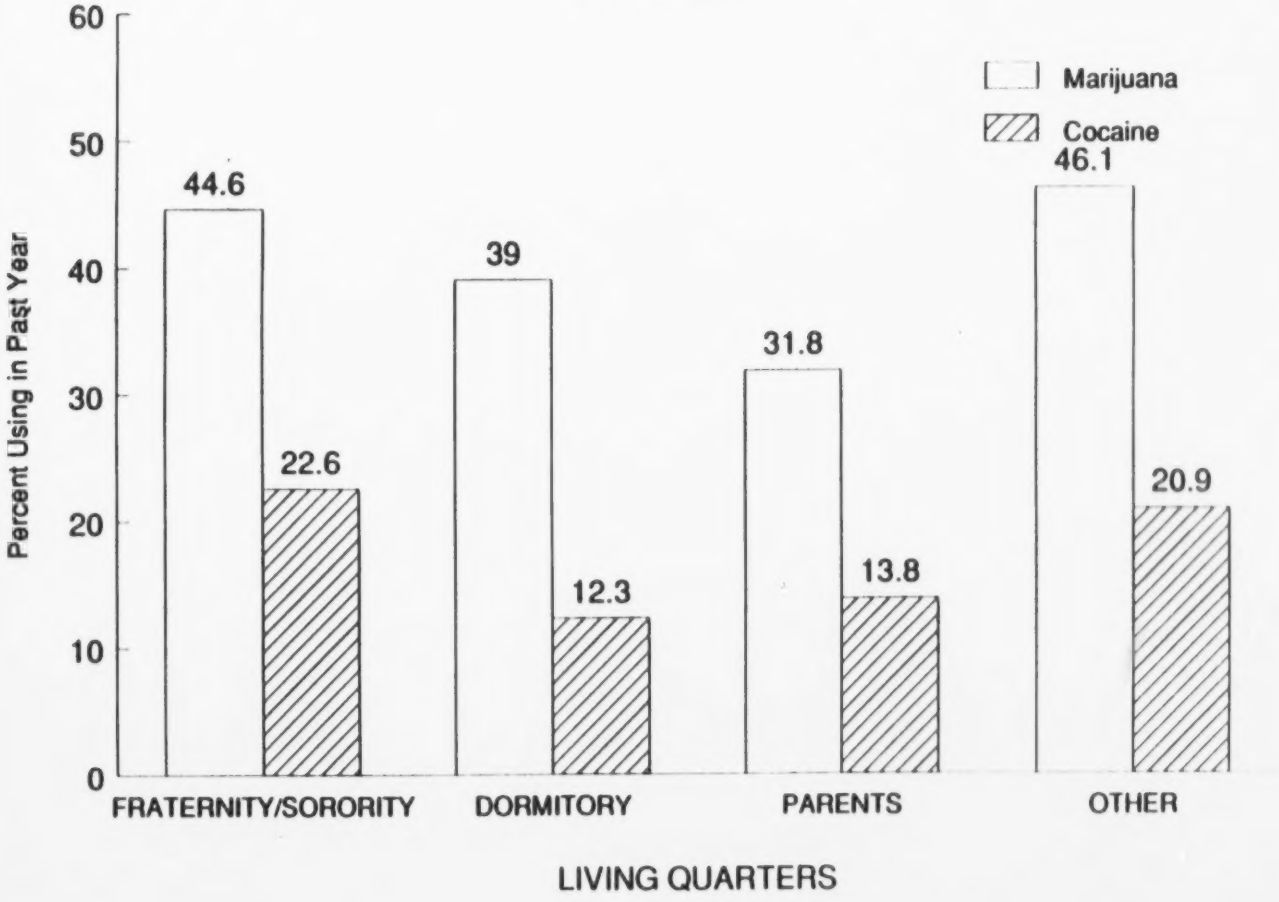


FIGURE 8

Drug Use by College Students in 1986 and 1987

by Field of Study

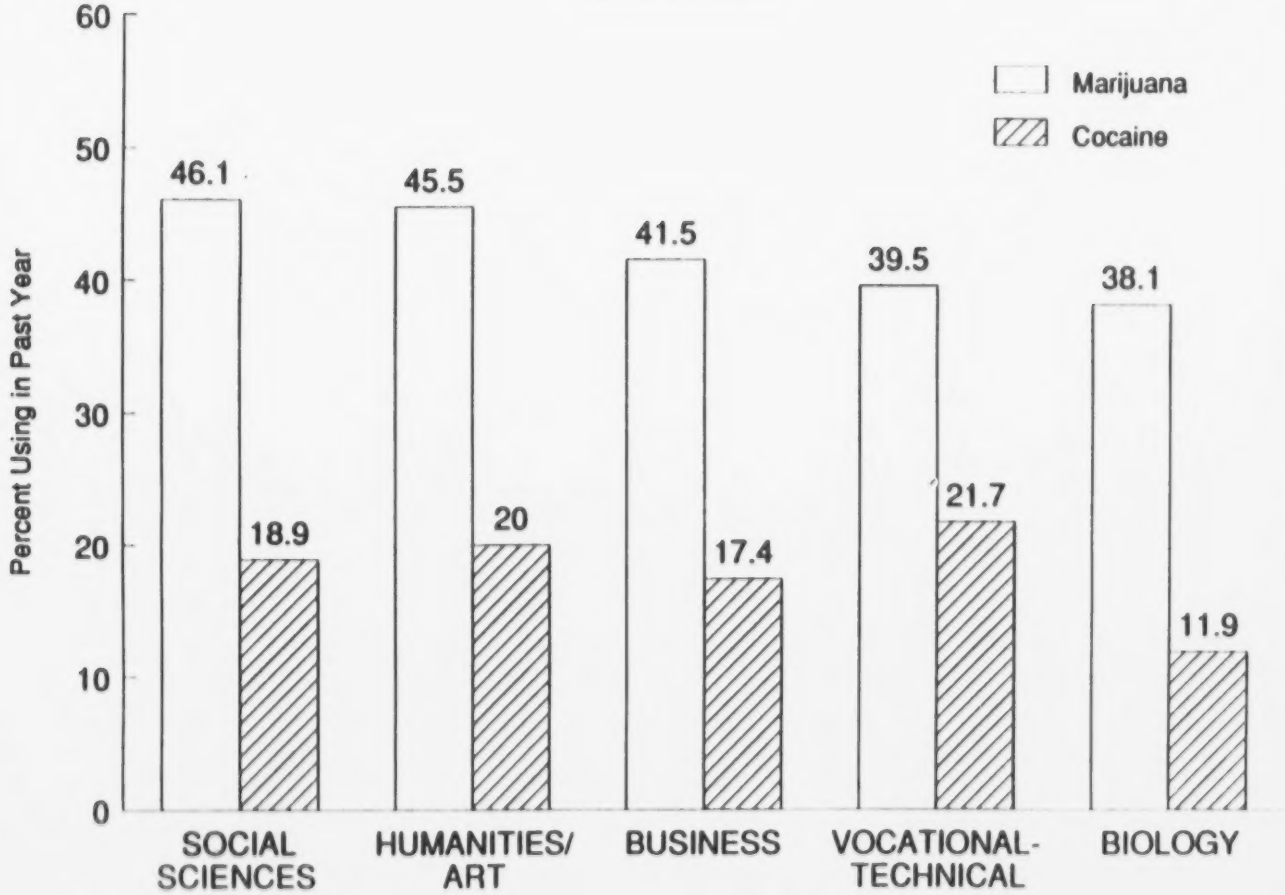


FIGURE 8 (continued)

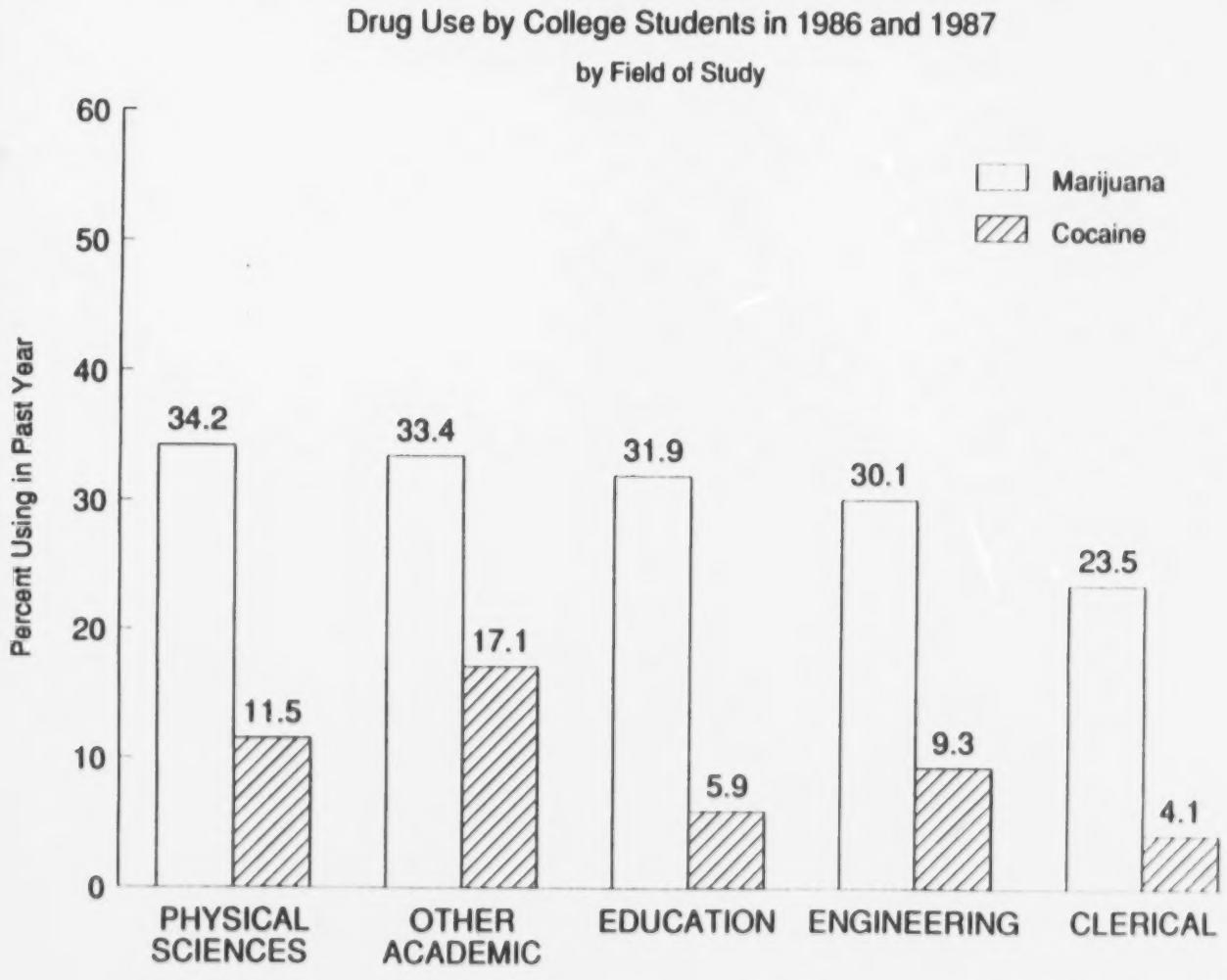


FIGURE 9

Drug Use by College Students in 1986 and 1987

by Grades in High School

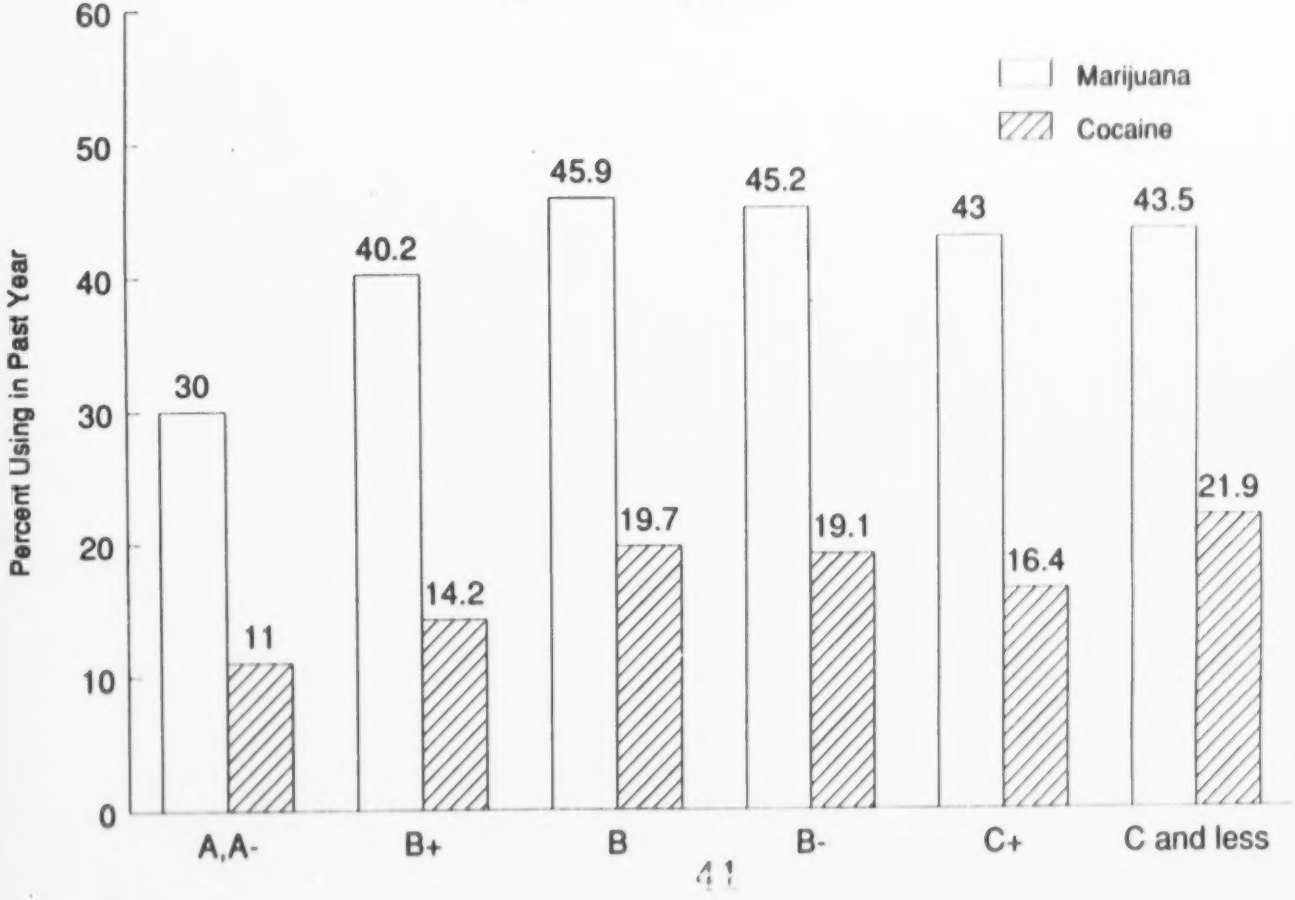


FIGURE 10

Drug Use by College Students in 1986 and 1987

by Grades in College

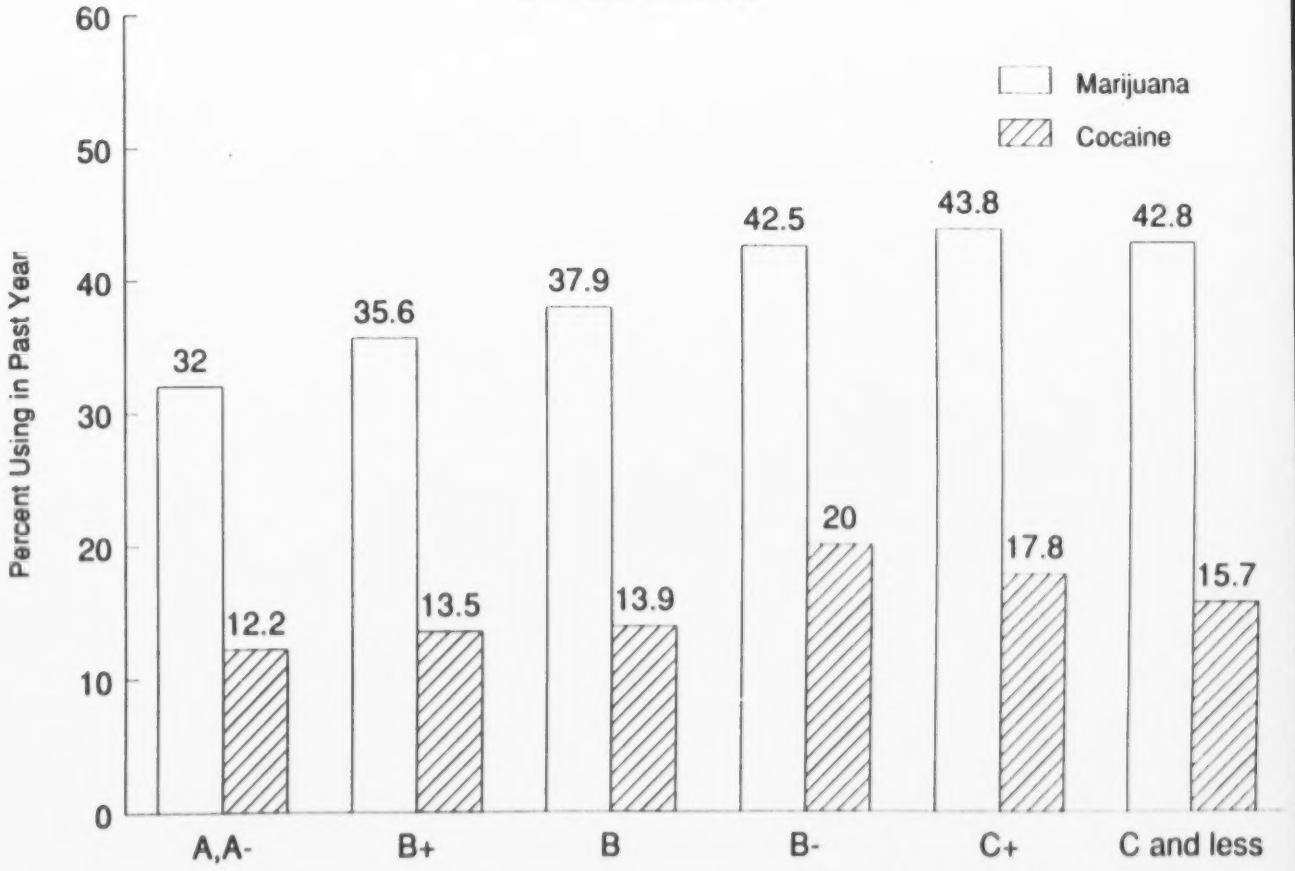


FIGURE 11

Drug Use by College Students in 1986 and 1987

by Employment Status

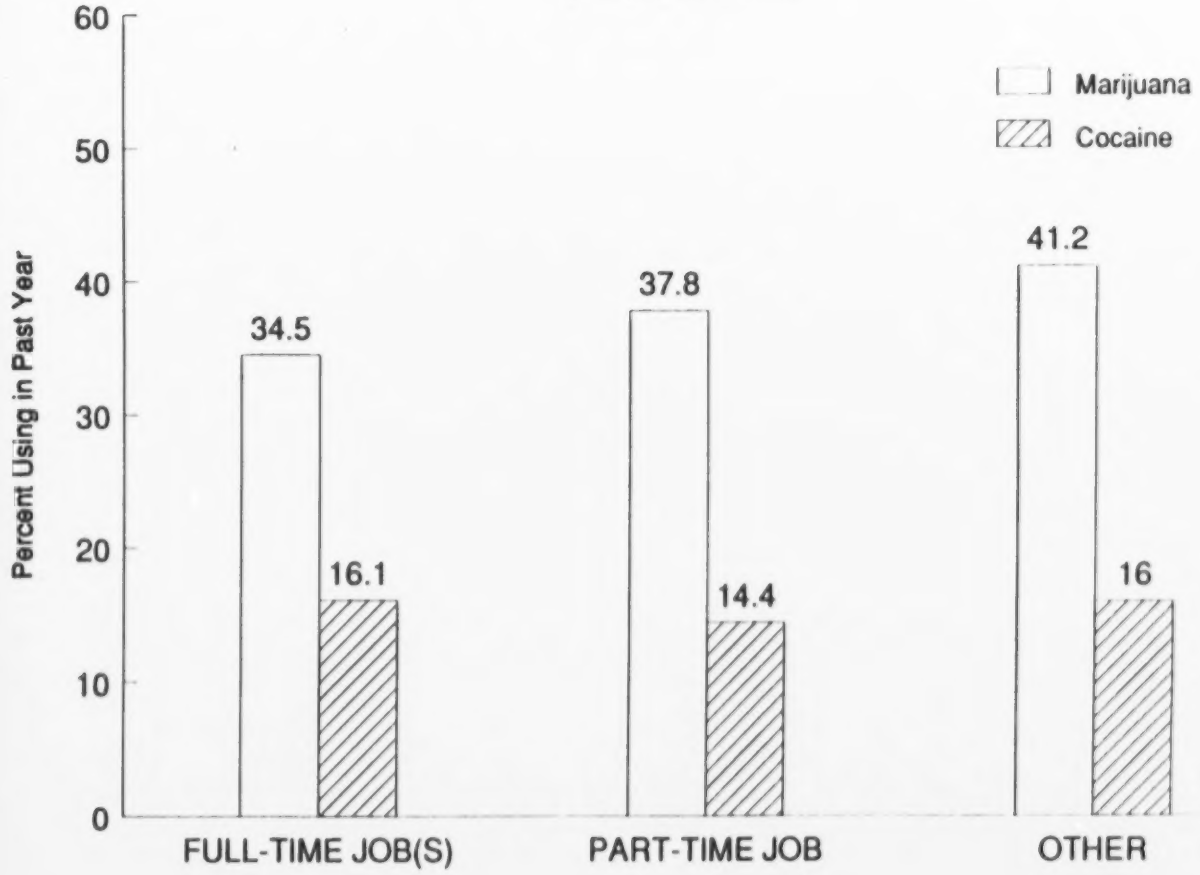


FIGURE 12

Drug Use by College Students in 1986 and 1987

by Number of Evenings Out per Week

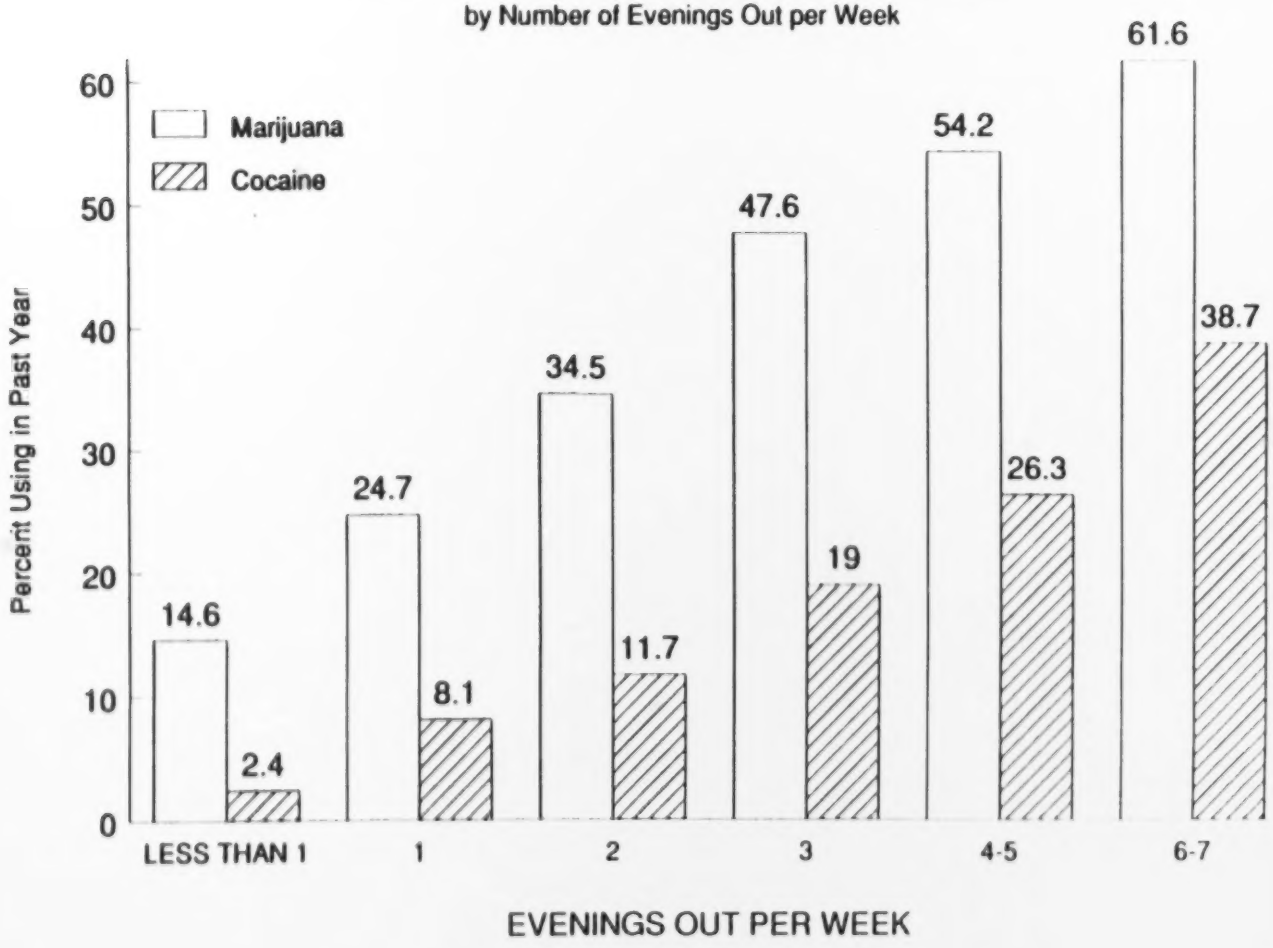


FIGURE 13

Drinking and Smoking by College Students in 1986 and 1987

by Type of College

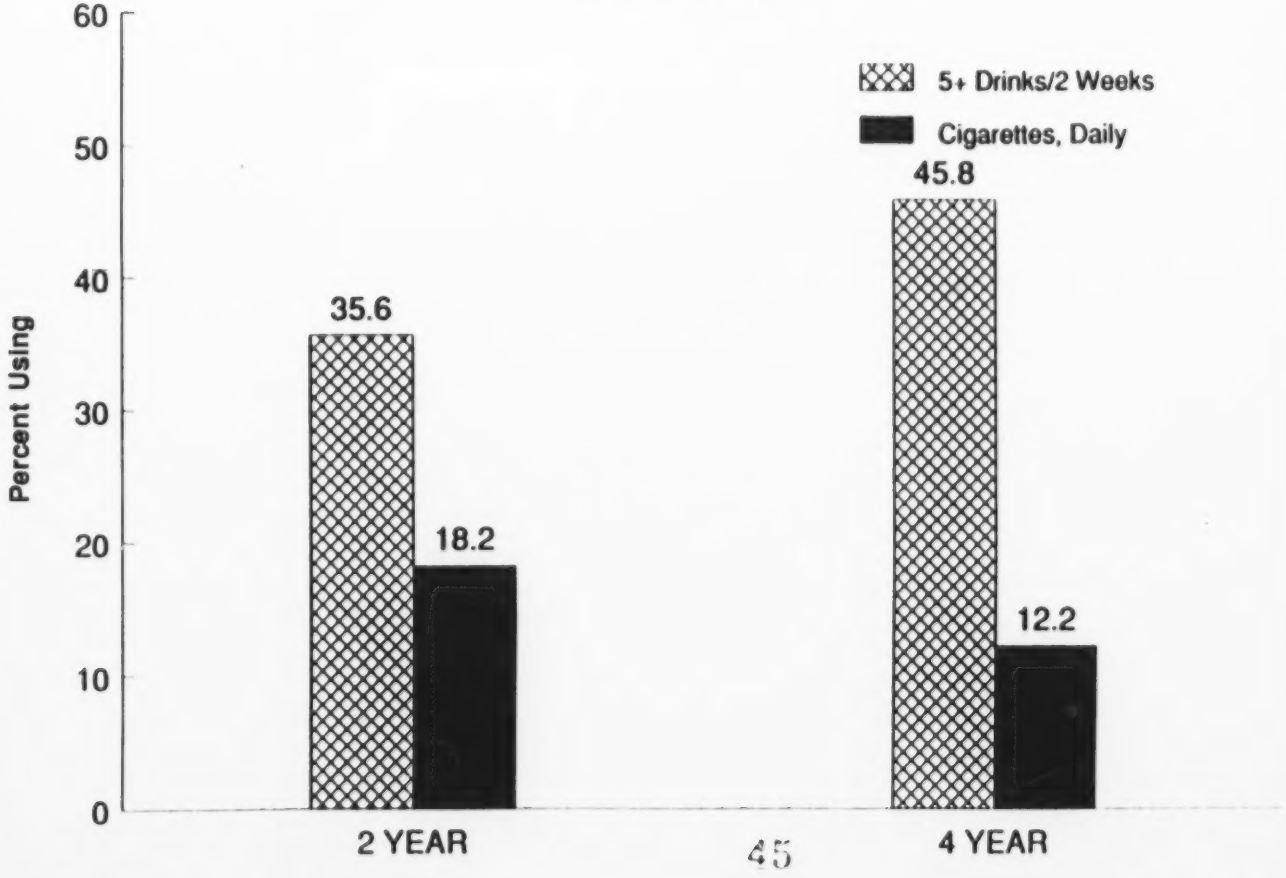


FIGURE 14

Drinking and Smoking by College Students in 1986 and 1987

by Living Quarters

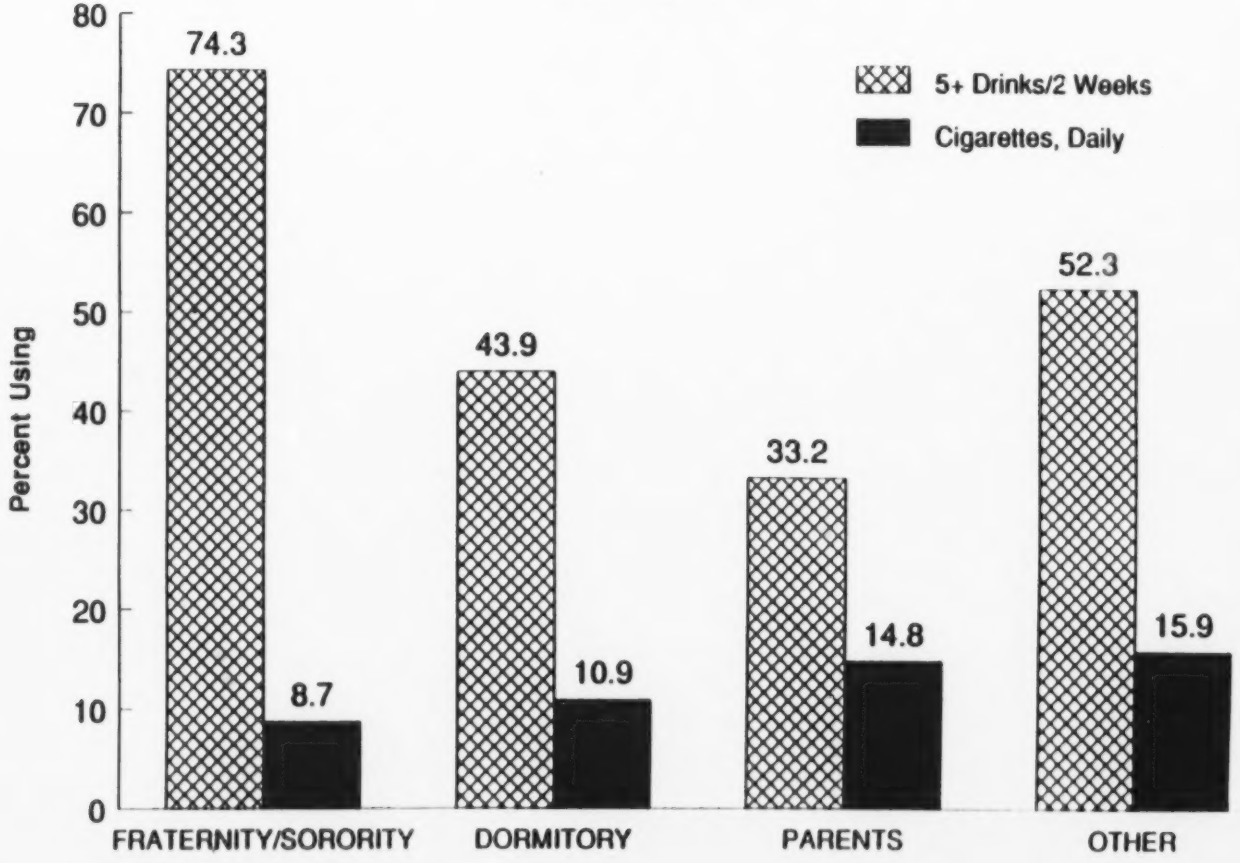
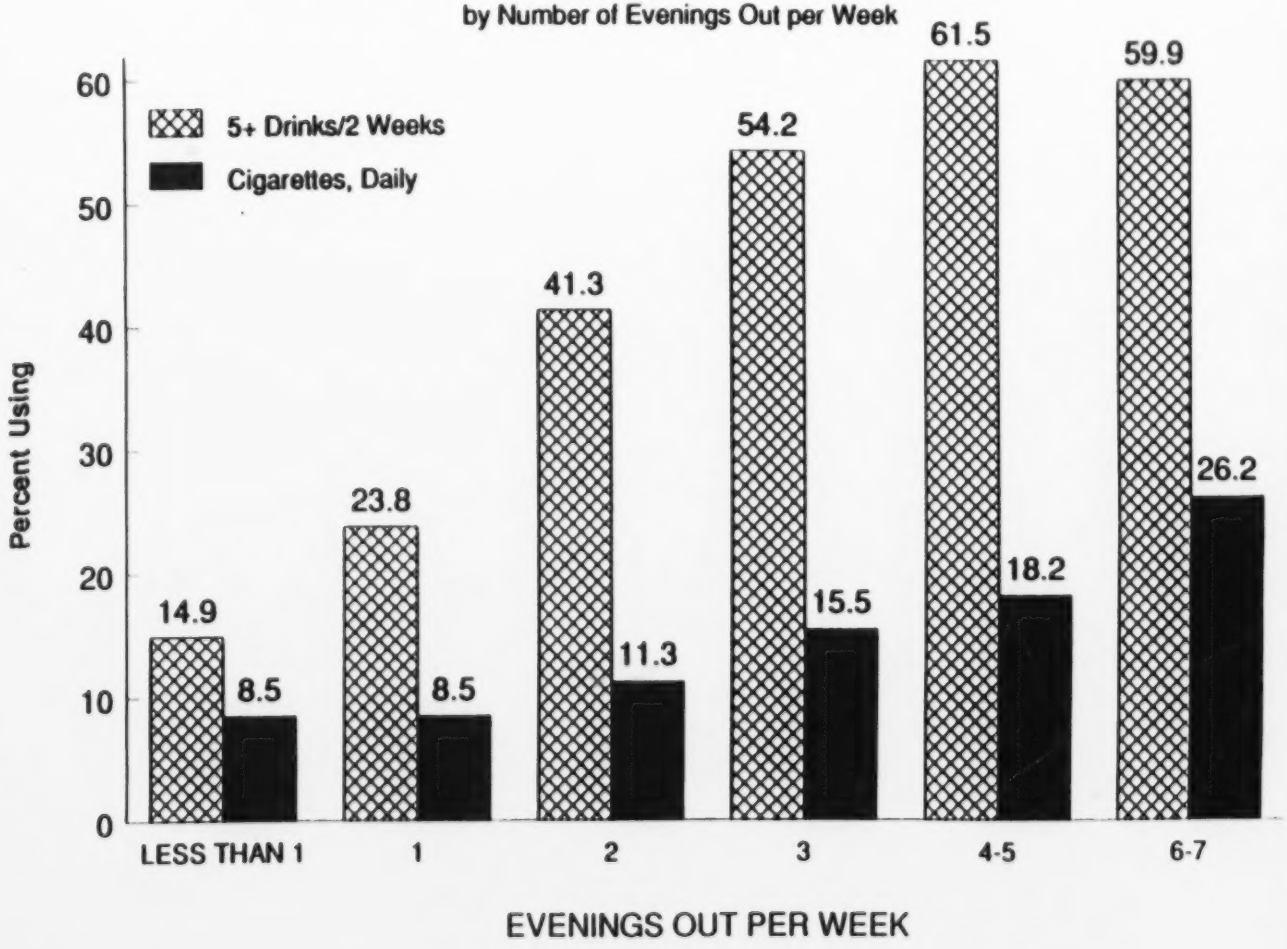


FIGURE 15

Drinking and Smoking by College Students in 1986 and 1987

by Number of Evenings Out per Week



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